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ABSTRACT

Program planning for economically deprived children might be improved if behavioral information pertinent to specific subcultural groups were systematically obtained. This prospectus focuses on developing a three-part behavioral model which, when integrated, would identify and profile the nature of disadvantagement in terms idiosyncratic and meaningful to a given subpopulation. The first part of the model sets up a subpopulation matrix for five major subcultural groups (Black American, Mexican American, Puerto Rican, American Indian, Anglo American) in terms of rural or urban locale, geographic area, social class, and sex. The second major section of the model considers psychoeducational dimensions such as intelligence, language skill, conceptual ability, perceptual ability, motivation, and self concept. The final section considers process variables such as child rearing practices, reinforcement patterns, parental expectations, language patterns, family composition, stability, mobility, and the physical surroundings of the home. Used prescriptively, this model can help mold an intervention program appropriate to fill in deficits profiled for ethnic groups across social class levels. Extensive bibliography is included. [Not available in hard copy due to marginal legibility of original document.] (WY)

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MICHIGAN STATE UNIVERSITY
COLLEGE OF HOME ECONOMICS
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Subpopulational Profiling of the Psychoeducational Dimensions of Disadvantaged Preschool Children:*

A Conceptual Prospectus for an Interdisciplinary Research

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SUBPOPULATIONAL PROFILING OF THE PSYCHOEDUCATIONAL DIMENSIONS OF DISADVANTAGED PRESCHOOL CHILDREN

Robert P. Boger
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Although the phrase is becoming very trite and increasingly annoying to the ears of social scientists, we continue to run out of time in our programs to overcome basic inequities in the "cafeteria" of opportunity offered American children. Contemporary events would indicate that feelings remain strong both from a liberal and a conservative vein, but the "writing on the wall" concerning preschool programs is clear, they will increase and they will become more sophisticated.

One of the real limitations in improving our efforts is the lack of adequate input knowledge about the particular natures of the children we are attempting to help. Education has been for years moving to more prescriptive, individualized approaches to the development of children, and although available resources clearly limit the capabilities of individual Head Start Centers in this regard, we should be able to make Head Start a much more potent force in meeting the idiosyncratic needs of subpopulational groups of disadvantaged children.

The question of what specific groups of disadvantaged children need in compensatory education programs has been armchaired at many levels and partially researched, but specific, empirically based, inclusive approaches for the variety of children in the disadvantaged

population are not available. New programs could be designed and those in existence vastly improved if this behavioral information were systematically obtained.

As Gordon and others have so often pointed out, encounters with the environment are especially critical molders and determinants of patterned behavior in young children (Gordon, 1966). The environment of the young child centers in the home where the family acts as the primary agent of socialization imparting the child with the skills, knowledge, attitudes, values, and motives current in the group (Sewell, 1963). The process of socialization is vividly described by Parsons (1953). The child is like a pebble thrown by the fact of birth into a social pond. The effects of this event are at first concentrated at the point of entrance, but as he grows up, his changing place in society resembles successively widening waves radiating from his initial place in the family of orientation. Thus, knowledge about what the child learns in the early years in the home must be more a part of our input into intervention development, particularly as it relates to specific subcultural groups.

The disadvantaged are a heterogeneous group of economically deprived children, not a homogeneous group as our programs too often indicate. In the past three years, since Head Start began, research on the disadvantaged has mushroomed resulting in new classroom approaches and materials, but a gap remains in the information; we still do not know enough about the eteology of disadvantagement or what the term means for specific sub-groups of disadvantaged children. The research on

the disadvantaged tends to make the mistake of generalizing about a population that is infinitely variable. Middle class-lower class comparisons were helpful in the beginning, but for compensatory programs meaningful to specific groups with specific problems, more definitive approaches are needed. In his often quoted paper in the Review of Educational Research, Gordon (1965) commented that "there is probably no typically socially disadvantaged child but instead a wide variety of such children with widely varying characteristics. To describe them and plan for them as a group is hence in error, differential psychology is as important here as in any other area (p. 385)." The recognition of differences should lead to techniques for measurement and tailoring programs responsive to individual needs (Deutsch, 1967). This discussion underlies the need for specific information about the differential school learning abilities of children from various disadvantaged groups.

The focus of this paper is the development of a proposed approach for profiling psychoeducational dimensions for subpopulations of disadvantaged preschool children. The three main parts of the model are subpopulations of the disadvantaged, psychoeducational dimensions of the child and process variables of the child's significant environments. Each of these will be considered separately. I would like to mention here that the development of this work was carried out in large part by Susann Ambron, a research associate with our Center, presently serving with the Peace Corps in Jamaica.

As Stodolsky and Lesser point out in their significant article concerning Learning Patterns in the Disadvantaged (Stodolsky & Lesser, 1967) the problem of definition continues to plague us in dealing with the concept of disadvantagement in our culture. Which dimensions are to be included as critical in defining subcultures within the general disadvantaged population is perhaps the easiest part of the task.

For the purposes of this model, the following selected subpopulational variables were included to form the matrix: cultural group, rural or urban locale, geographic area, social class and sex. If one thinks in terms of the typical cubic model each cell or block defines a theoretical unit of the overall population of the disadvantaged. In reality there are empty cells in which a nonsignificant number of children fit, but the vast majority of the cells describe significant groups among the disadvantaged. Children within a given group can then be identified according to the subpopulation variables defined by the cells of the subpopulation matrix.

Cultural Group

The major subcultural groups of the disadvantaged have been identified as Black American, Mexican American, Puerto Rican, American Indian and white American. Though fewer in number, members from other cultures such as Oriental, Polynesians and Eskimos are also among the disadvantaged. Cultural group membership is here defined as a "collection of people considered both by themselves and by other people to have in common one or more of the following characteristics: (a) religion, (b) racial

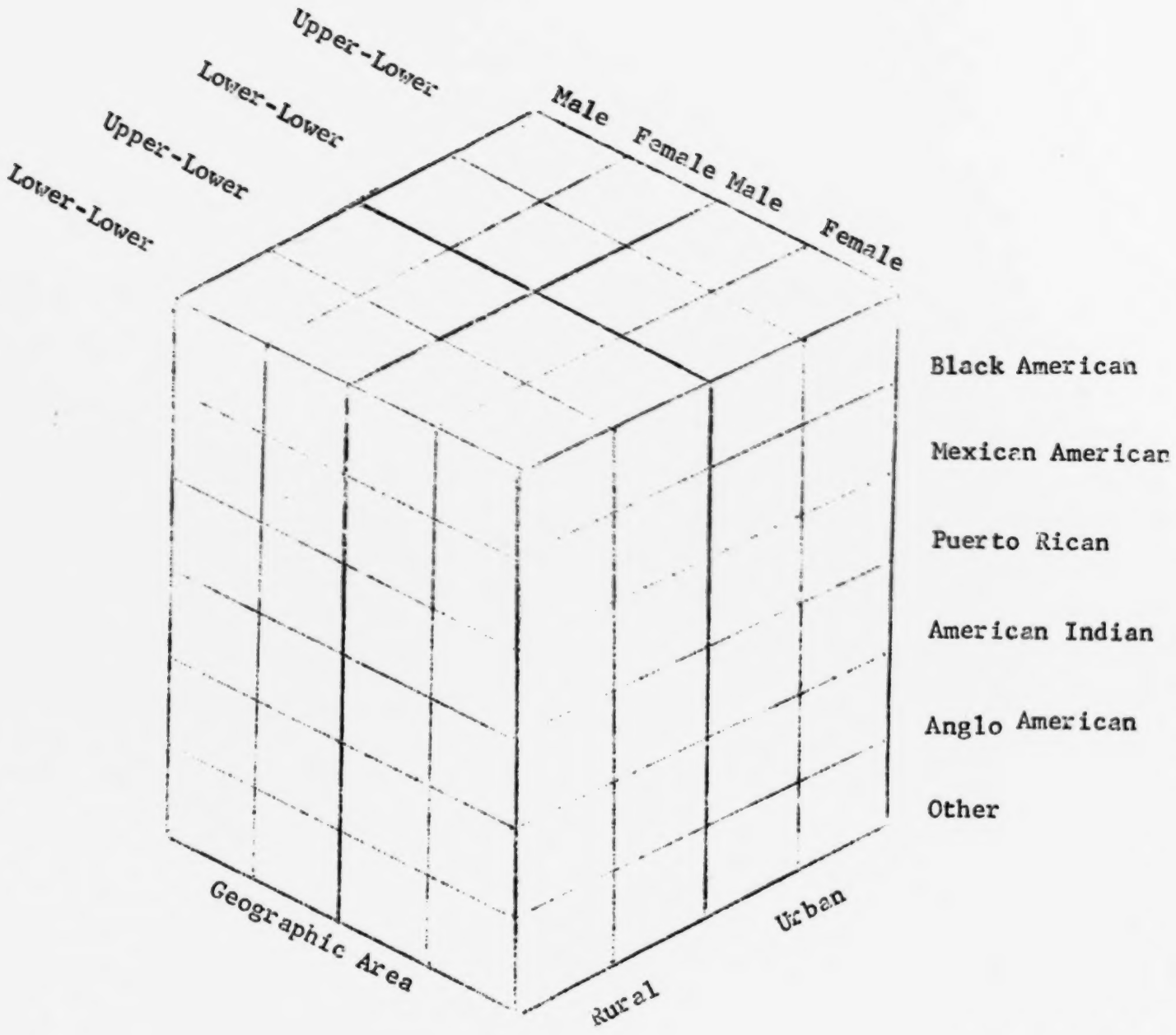

Figure 1. - SUBPOPULATION MATRIX

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origin (determined by identifiable physical characteristics), (c) national origin, or (d) language or cultural traditions (Harding, Prohansky and Chein, 1954, p. 1022)." Some features of the cultural heritage of the Black American, Mexican American, Puerto Rican, and the American Indian conflict with the dominant American culture making adjustment and acculturation difficult. The movement of many of these people to new locales in search of a better life has increased this problem.

In the cities the disadvantaged have been confronted with life in an industrial, urban society for which they were not prepared. Mainly from rural backgrounds, they lack education and job skills, and are often discriminated against in employment and housing. Among the disadvantaged cultural groups that are moving to urban areas in substantial numbers are: Black Americans from the rural South, whites from southern mountains and Puerto Ricans from the islands. These groups have predominantly migrated to northern industrial cities. Mexican Americans are moving to urban areas of the West and Middle West, and American Indians are slowly migrating from the reservations to the cities of the West in search of a better life.

It is not the purpose of this paper to review for you the backgrounds of all of the disadvantaged ethno-cultural groups, but a minimal review is needed to establish the validity of this dimension.

The cultural roots of Black Americans were destroyed and a foreign culture forced upon them when they were brought to the United States as slaves. Slave status resulted in degradation of self esteem and the deliberate destruction of the family unit. Within this system the male

role was diminished while the female role was enhanced. In a society where Black Americans have been grossly relegated to an inferior status, these role differences for the average Black American have continued (Gans, 1965; Kardiner, 1966). Although most Black American families today are headed by men, the proportion of families with female heads is much greater among blacks than among whites at all income levels, and has been rising in recent years. The Kerner report states that among families with incomes under $3000 in 1966, the proportion with female heads was 42% for blacks but only 23% for whites. (Kerner, 1968, p. 261). As one could anticipate, the disadvantaged black family has therefore been described as an unstable matriarchy adapting to conditions imposed by society (Bernard, 1966).

The Mexican Americans in the United States came from a traditional, isolated, agrarian (patron-peon) economy. In the patron-peon system, much like the lord and vassal relationship of the Middle Ages, the peon labors on the farm in return for the patron assuming the responsibility for the physical, political, and economic welfare of the peon and his family. This pattern is rapidly dissolving and the Mexican Americans are having to move to find work, but the underlying cultural values remain. The people are present oriented, dislike personal competition, and rarely take the initiative in a problem situation. In searching for complete economic and political security they tend to be blindly loyal to leaders with whom they identify (Knowlton, 1966). The cohesive paternistic family including a number of godparents and other nonblood relatives must be abandoned when the Mexican Americans move to cities or to seasonal crop farms in search of work. Not only is language a

barrier, but because of the father's lack of skill he often is unable to get a job in the city. The wife, however, can usually find work. With the wife working and the father unemployed there are drastic role changes. Living in a new culture thus causes considerable stress in the family (Valdez, N.D.).

The Puerto Ricans come from an agricultural background similar to the Mexican Americans; however, in addition to a shift from a rural to an urban society and language difficulties, they are burdened with differences in racial identity. The codification of racial criteria in social structure of Latin America differs considerably from that in the United States. Among the Puerto Ricans, racial characteristics range from completely caucasoid to completely Negroid. No Puerto Rican is unaware of his position based on the color of his skin, but in Puerto Rico intermingling of people of different color and racial characteristics is common. In the United States the social structure concerning race is split into a black and white dichotomy while in Puerto Rico it is divided into three categories: black, intermediate and white. The large number of Puerto Ricans in the intermediate group resent the Americans' assumptions about racial identity. This is among sources of real conflict for Puerto Ricans who come to the United States (Bonilla, 1966).

The social character and values of American Indian societies fostered the preservation of the status quo and the belief in external supernatural forces determining one's fate. An Indian family, even today, accumulating substantially more wealth than other members of the tribe is considered greedy. Tribal sharing and generosity have laid the foundation for a socialist society lacking entrepreneurial incentives. Aspects of the

cultural traditions among the American Indians, therefore, make it difficult for them to function in American society (Spindler, 1966). Other factors related to these and other cultural groups are certainly pertinent and this is not intended to be an inclusive list, but the validity of the dimension as a differentiating variable is clearcut.

Rural or Urban Locale

Rural or urban locale is included in the model for obvious reasons some of which have been mentioned. Disadvantaged children from rural backgrounds show significant differences in school learning skills from their urban peers. Urban is arbitrarily defined in our model as persons living in a place of 2,500 inhabitants or more incorporated as cities, towns, boroughs and villages or in diversely settled urban fringe around cities of 50,000 or more. The remainder of the population is classified as rural. The dichotomous definition of locale does not adequately describe the reality of a continuum between rural and urban and rationales for other splits can undoubtedly be made.

Geographic Area

Geographic area it would seem can be defined in however fine or gross terms one wishes. The problem, however, stems from the fact that any more gross split does not apply as well for one major cultural as for another. For example, the North and South split may serve adequately in interaction with other dimensions to describe significantly different sub-populations of black Americans but the notion is inadequate for Mexican

Americans or for Anglo Americans. For purpose of a general model, however, geographic differences seem pertinent enough to be given careful consideration.

Social Class

Although social class has been investigated for years no generally accepted definition or measurement has been developed. The various interpretations include a way of life, power over resources and people, reputation and esteem or a combination of objective properties including occupation, education and residence (Barber, 1957). Hoffman and Lippitt (1960) reviewed the various concepts of social class: Marx (1909) described it as man's relationship to the means of production (occupation), Veblen (1918) considered consumption patterns the main indicator of social class, Warner and Lunt (1941) defined social class in reference to other people's judgment of the families prestige and esteem, and Center (1949) suggested that an individual's self judgment defined social class. Hollinshead and Redlich (1958) modified an objective scale which was based on family properties developed by Warner, Meeker, and Eells (1949). Hollinhead's Index of Social Position used a weighted criteria of occupation of family head (weighted 9), residence (weighted 6), and education of family head (weighted 5) to identify five social class categories. Regardless of the social class index used it may need to be further developed on the lower end of the scale since the model is focused on lower class.

The typological distinction has been made in the model between upper-lower and lower-lower class. This division of the lower class has been

found in every major community study reflecting differences in "material well being, occupational, and educational opportunities, degree of personal and family stability, self and community perceptions, and integration with the larger society (Keller, 1966, p.8)." The lower-lower class has been characterized as suspicious, distrustful, uncertain of the future, and concerned with immediate gratification (Keller, 1966). Children from the lower-lower class have been described as having difficulty forming words, quietly obedient, poorly nourished, and completely lacking confidence in their ability to master a problem (Pavenstedt, 1965). The upper-lower class in contrast are semi-skilled or skilled workers with modest means who are described as hardworking, taxpaying, and family oriented. The ideal is high school graduation, out the norm is dropping out of school at sixteen. More secure economically than the lower-lower class the upper-lower class are less secure morally or psychologically due to the pervasive anxiety about status and respectability among its members (Keller, 1966). Upper-lower class children have more contact with both the mother and father, and the children tend to be more verbal than lower-lower class children (Pavenstedt, 1965).

The split between upper-lower and lower-lower class characteristics is not to deny lower class commonalities. The following is a modification of Keller's (1966) characteristics of lower class life: (a) a low community status and have to purchase on credit, (b) their economic potential is highest in youth, (c) they live in less desirable neighborhoods in inadequate dwellings, (d) little participation in formal organizations, (e) high proportion of disadvantaged in cultural minority groups.

Sex Differences

The sex of the child is included in the subpopulation matrix of the model because male and female roles in the lower class are more clearly distinguished than in the middle class (Kagan, 1964a). Also, sex differences have been demonstrated in school learning skills such as arithmetic reasoning, spacial orientation, perceptual speed, accuracy, memory, numerical computation, and verbal fluency (Anastasi, 1958).

The Identification of Psychoeducational Dimensions

Selected on the basis of their significance for influencing school learning and being shaped by the environment the psychoeducational dimensions have been identified as general intelligence, language skill, conceptual ability, perceptual ability, motivation, and self concept. According to the model these dimensions will be measured and profiled for subpopulations of the disadvantaged.

General Intelligence

General intelligence is the most comprehensive of the psychoeducational dimensions of the model. As it is used in the model, intelligence is a multifactor construct derived from a set of measurement operations to designate levels of mental functioning (Ausubel, 1958). Because of the long standing interest among psychologists and educators in the measurement of intelligence there is substantially more research available on general intelligence than the five other psychoeducational dimensions of the model.

The development of general intelligence is a complicated process and recently many of the established tenets are being reexamined. Hunt's provocative book Intelligence and Experience rejects the old assumptions of fixed intelligence and predetermined development. The crucial role of early experience is emphasized and he purports that going up the phylogenetic scale increases the importance of the early environment. The differential experiences of a cultural group, rural or urban locale, social class, and sex, as outlined in the subpopulation matrix, have profound effects on children's intelligence.

Lesser, Fifer, and Clark's (1965) comprehensive study of mental abilities of children from different social class and cultural groups is most pertinent here. In their study 320 first grade children from Jewish, Black-American, Puerto Rican, and Chinese backgrounds were divided into middle and lower class groups based on the occupation and education of the head of the household and the type of dwelling. The results suggested subcultural differences in both the absolute level of each mental ability (including verbal ability, reasoning, numerical facility, and space conceptualization) and the patterns among these abilities. Social class and ethnicity interact to affect the absolute level of each mental ability, but not the pattern among these abilities. Their findings suggested that Jewish children were superior in verbal ability and black children were relatively inferior on spatial and numerical tasks and average on verbal ability. The Puerto Ricans were weakest of the four on verbal quality, while the Chinese children in the sample scored highest on spatial conceptualization. This study has been replicated in Boston with duplicate results for ethnic groups

comparable to the original New York sample (Stodolsky & Lesser, 1967). The results then would seem to be unequivocal that various cultural groups foster the development of different patterns of mental abilities.

Two particular generalizations should be made concerning the performance of black children on intelligence tests. Black children score lower than white children and as the black child gets older his measured intelligence decreases. Deutsch and Brown (1964) examined the scores of 543 urban school children stratified by race, social class, and grade level on the Lorge-Thorndike intelligence test. He found that black children scored lower than white children regardless of social class. As a result of the cumulative effects of deprivation, the trend of the low IQ's for black children intensified over time. Other researchers have also found this phenomena among black children, in a study of 1800 black elementary school children, there was a negative correlation between age and IQ, at five years old the mean IQ was 86, while at thirteen the mean IQ was 65 (Kennedy, VanDeRiet & White, 1963). Osborne (1960), in a longitudinal study of racial differences and school achievement, found similar results. There was two years difference in mental ability at grade six and four years difference at grade 10 between white and black children. Finally, fitting into the developmental picture, the intelligence difference between black and white infants was shown to be less than when the children grow older. (Dregor & Miles, 1960).

A number of researchers have attempted to provide a tenable basis for these differences. Klineberg (1963) in an analysis of the problem, reaffirmed the lack of evidence to support the contention that genetic differences exist between black and white children. Not nearly enough

is known about heredity influence, but the evidence points clearly in the direction of the environment causation. Two ways in which the environment of the black child can lower his measured intelligence have been suggested: first "it can act to deter his actual intellectual development by presenting him with such a constricted encounter with the world that his innate potential is barely tapped," and secondly "it can act to mask his actual functioning intelligence in the test situation by not preparing him culturally and motivationally for such a task." (Pettigrew, 1964, p. 23).

Mexican American children, along with Puerto Ricans, and Orientals, often learn English as a second language. As might be expected, they perform poorly on verbal items. Information from a recent descriptive report of Head Start children's performance on the Stanford-Binet indicated that children in the rural south or from non-English speaking groups (Mexican Americans, Puerto Ricans, and Indians) did less well than other disadvantaged subpopulation children (Cline, 1968). In one of the few studies specifically on the intelligence of Mexican American children, Jensen (1961) found that lower IQ Anglo-American children were poorer learners than their Mexican American counterparts. Intelligence tests predicted immediate recall, serial learning, and paired-association learning of familiar and abstract objects quite well in the Anglo-American group, but not among the Mexican American children.

In a study of the effects of bilingualism upon intelligence test performance, Anastasi (1953a) reported 176 Puerto Rican children as a group to have fallen considerable below the test norms on Cattell Culture Free Intelligence Test even though the test was administered in both

English and Spanish. This work is supported by Lesser, Fifer, and Clark (1965) who also found Puerto Rican children weak in verbal ability.

The concern for culture free testing is a key issue in any proposed effort in this area, but researchers are more and more moving toward better measures of the nature of children's abilities based on and couched within their own cultural milieus. As Stodolsky and Lesser point out

> ...the ability (aptitude) versus achievement distinction has been attenuated. Intelligence tests must now be thought of as samples of learning based on general experiences. A child's score may be thought of as an indication of the richness of the milieu in which he functions and the extent to which he has been able to profit from that milieu. (1967, pg. 548).

Generalizing research results to Indian children for example has many of the pitfalls of broad statements about characteristics of disadvantaged children. There are wide variation in the cultural patterns of different tribes ranging from the Hopi of the Southwest to the Seminole of Florida. Research dealing with Sioux, Hopi, Zuni, Zia, Navaho, and Papago Indian children's performance on the Goodenough Draw-A-Man Test show no inferiority to white norms, but it has also been demonstrated on the Goodenough Draw-A-Man Test that Indian boys do significantly better than girls; this was partially accounted for by the fact that graphic art is traditionally a masculine interest among the Indians (Dennis, 1942; Havighurst, Gunther & Pratt, 1946). Klineberg (1927) in a study of 120 Yakima Indian children and 110 white children on the Pinter-Patterson series found a "qualitative" rather than a "quantative" difference in the behavior of the two groups. The white children were quicker but the Indian children made less errors.

Though speed is a salient characteristic of American life it has not penetrated the subcultural patterns of many groups. The results of work by Spellman using a Color-Form, Size reference measure reinforces these findings.

Studies of the mental abilities of Japanese and Chinese American children have shown that they do less well on the verbal parts of intelligence tests as a result of bilingualism, but they excell in acuity of visual perception, recall, spatial relation, and in spatial conceptualization. This to some degree has been attributed to cultural patterns among oriental groups stressing art and handicrafts (Darsie, 1926; Lesser, Fifer & Clark, 1965).

Attempts to separate rural and urban factors relating to intelligence differences in children are somewhat less than clear. Three ideas draw substantial support; (a) rural children tend to have lower measured intelligence scores, especially on tests which require speed and have many verbal items, (b) the more isolated the rural child, the lower his intelligence score will be, and (c) the intelligence test score does not necessarily reflect the rural child's learning ability.

Comparatively lower scores, especially on group intelligence tests, have characterized the performances of rural children (Lehman, 1959). Taking a closer look at the problem, Sherman (1965) used a battery of nine tests including the Stanford Binet, Goodenough's Draw-A-Man Test, Knox Cube Test, and the Pinter Cunningham Primary Mental Test and found the more isolated the community from which rural children were drawn, the lower the scores on the intelligence tests. He also noted that the children's scores were somewhat higher on tests when the tempo was the

slowest. In addition, Shepards (1942) study of non-verbal abilities of matched rural and urban children showed that rural children were superior in mechanical ability while the urban children scored highest on the verbal ability and tests requiring speed. The author concluded that "the environmental milieu (sic) in which a child is reared may influence the development of certain skills, abilities, and fields of knowledge most significant and valuable for those living in that specific geographic or source area"(p. 458). Lower performance of rural children is not an immutable situation. Boger (1952) studied the effects of perceptual training on the intelligence test scores of rural elementary school children. He concluded that the extent of improvement on the intelligence test scores as a result of training indicates that scores from intelligence tests are not representative of rural children's actual ability. Furthermore, Wheelers (1932, 1942) studies of 3,252 East Tennessee mountain children indicated a promising trend that through the improvement of the economic, social, and educational status of the mountain area between 1930 and 1940, an average IQ gain of 10 points resulted among the school children. As a final note, Anastasi (1958) on the basis of research suggested that the rural-urban test performance gap is shrinking. This change may partly be the result of population shifts and partly from major improvements in rural living. The specific factors may be the gradual disappearance of farms and the replacement of farm laborers by machinery, as well as by the substantial increase in facilities for education, communication, and transportation available to the rural population.

The intelligence test scores of lower class children have been established by many researchers (John, 1963; Jones, 1954) as lower than those of middle class children. On the average the test score difference is about twenty points regardless of the social class index used. Recently, however, there have been some pertinent findings (Deutsch & Brown, 1964; Wilner, Rider, & Oppel, 1963) about lower class and its effect on intelligence. The cumulative deficit hypothesis and the relationship between intelligence and learning ability emphasize the profound effect of verbal learning on intelligence in lower class children. Under conditions of environmental deprivation, as often exist in the lower class, the child's measured intelligence declines over time. This trend in intellectual ability has been used to support the cumulative deficit hypothesis. Children from disadvantaged homes who had low IQ scores in first grade had lower IQ scores when they were retested in fifth grade. They had missed the basic learning skills, particularly verbal skill, which were necessary for transition from one learning level to the next and instead of cumulative learning they suffered with a cumulative deficit. Jensen (1962) took a closer look at the differences in learning ability among slow learners five to ten years old in different socio-economic and cultural groups. He found that in "culturally nondeprived children, there is a good correlation between learning ability and IQ, measured by standard tests. In culturally deprived children, IQ tells little about learning ability of the nonverbally mediated variety. Deprived children seem to be 'normal' in learning ability, but have failed to learn the verbal mediators that facilitate school learning (p. 15)." Jensen's findings,

concerning the learning ability of lower class children not being reflected in an intelligence test, corresponded to his findings on Mexican American children (1961) and Boger's (1952) conclusions about the intelligence performance of rural children referred to previously.

Sex differences in mental abilities, with the exception of verbal fluency favored in girls, are less evident at the younger age levels. It seems reasonable that the differences that appear later are for the most part culturally determined (Ausubel, 1958).

In summary, the subpopulations interactively impinge on the development of children's mental abilities. Though there are commonalities, disadvantaged children from each ethno-cultural group which has a semblance of a homogeneous life style fosters the development of specific mental qualities. Rural locale and lower class tend to be associated with lower test scores particularly on verbal subtests and tests requiring speed. If the performance of a lower class child on an intelligence measure was poor in first grade, then it is very likely that the child's measured intelligence will be even lower on future retests.

Language Skill

The close relationship of language skill and learning ability is common knowledge. Language skill, as used in this model and as generally conceived in preschool work, is of course more than that measured on the verbal section of an intelligence test. As used in the model, language skill is a socially conditioned set of communication variables such as

phonetic structure, syntactic structure, vocabulary and complexity. In addition, it should be recognized that there is both a covert and overt dimension to language, and that perceptual and conceptual abilities as well as intelligence are reflected in language skill.

Learning one language in the family and another at school is a problem faced by many disadvantaged children from non-English speaking cultural groups (Mexican American, Puerto Rican, and Indian). This linguistic bifurcation among the disadvantaged tends to have a negative influence on the child's skill in both languages.

Lower class children have been described as having various kinds of language related problems. Some of Deutsch's (1964) initial postulations that children from a noisy environment where directed and sustained speech stimulation are rare would be deficient in the recognition of speech sounds and would have difficulty in skills which required auditory discrimination such as reading have been extensively supported. Other findings indicate that lower class children are poorer readers and also have poor auditory discrimination. Language development and use have a universal sequence: listening, speaking, reading and writing (Newton, 1964). Therefore, aware of the deficiency caused by poor auditory skill in the foundation of language development, the number of communication difficulties among lower class children is not unexpected. Milner (1951) investigated the background of black children who scored low on a reading readiness test. These children were predominantly from lower class homes where there were few books and little interaction between parents and children. Lower

class children use fewer words, nonstandard English, and short, less complex sentences. Figurel (1964) found, for instance, the vocabulary of the disadvantaged child is significantly less than that of the middle class child and that the disadvantaged often use nonstandard English. Thomas (1962) investigated the sentence development and vocabulary usage of lower class children and found that lower class children use fewer words in sentences and failed 20 to 50% of the vocabulary from five word lists recommended for the primary grades.

The relationship between language and conceptual ability in lower class children has been investigated by many researchers. Bernstein (1964) identified the quality of the language used in the home with social class. He identified two linguistic codes, restricted and elaborated. Restricted codes are simple, short, condensed and lack specificity, while elaborated codes are grammatically more complex and pertain to a particular situation. The middle class child is able to use both forms, but the lower class child is generally limited to restricted codes. For the disadvantaged child this means that he is isolated linguistically and perhaps conceptually from the cultural mainstream. Delay in the acquisition of certain formal language forms (elaborated code) make it difficult for children to move from concrete to abstract thought (Ausubel, 1964). Deutsch (1965), studying the relationship between socioeconomic status, race, grade level and language variables, found deficiencies based on race and class for measures of abstract and categorical use of language as distinguished from denotative and labeling. (Supporting the cumulative deficit

hypothesis, language deficits identified at first grade were more serious at fifth grade.) Assuming that children test their notions about words primarily through interaction with more mature speakers, John and Goldstein (1964) suggested that the amount of interaction varies from one social class to another and that the shift from labeling to categorizing also varies with the social class. The results of their study indicated that lower class children had a limited scope of verbal interaction in the home, were deficient in language development, and were impeded in their ability to categorize in terms of explicit statements of concepts.

This review of language skill is certainly not inclusive and the descriptions of specific language skill deficits for the "disadvantaged" as a group are becoming quite commonly known. The dearth of information concerning the etiology of specific problems for specific subcultural groups remains, however, as a distinct stumbling block to meaningful intervention.

Conceptual Ability

Conceptual ability is used here in a broad sense referring to skill in organizing and reducing the ambiguity and imprecision of the environment impinging on the senses. The individual acquires concepts through a complexed learning process which is reciprocal between the individual and the environment (Sigel, 1964). "Environmental sensations stimulate the person," described Sigel," and various sensations eventually become intensified, named, and organized. Through his

increased ability to discriminate and to generalize he develops schemata. In so doing, the individual becomes increasingly emancipated from the perceptual and sensory aspects of the environment and is able to approach it in a conceptual way (1964, p. 211)."

The ability to use concepts by thinking of problems in terms of symbols and classes is seen by Bruner as the initial step in efficient learning, followed by searching for a solution, taking the initiative to solve the problem, and persisting when the problem is difficult (1966).

It is also apparent that conceptual thinking is required for such basic school learning tasks as generalizing, transferring learning, and reading. Obviously, conceptual ability is an essential psycho-educational dimension to include in any profile of learning predictions and the specific aspects of conceptual ability might be level of abstraction and cognitive style.

Level of differentiation and abstraction refer to gross differences in the development of concepts. Cognitive style according to Kagan, Moss and Sigel is a term which refers to the "stable individual performances in mode of perceptual organization and conceptual categorization of the external environment (Kagan, Moss, Sigel, 1963, p. 74)." Level of abstraction; although important, does not account for the cognitive variation of children at the same age with similar IQ's according to Kagan and others (1963). In addition, the concepts a child acquires are affected by the predisposition he shows to attend to particular features of the environment (Harlow, 1959). It is

presumed that this predisposition of cognitive style will influence the kind of content a child will employ in evolving his concepts (Kagan, Moss, & Sigel, 1963).

Kagan (1964b) has explored the cognitive implications of impulsive cognitive style in lower class children. He suggested that reflective cognitive style is necessary for analytical thinking. The child must reflect on alternatives and analyse visual stimuli (delay discrimination) to function analytically. The impairments of disadvantaged children may arise from the lack of opportunities to develop reflective attitudes. In empirical studies Kagan (1965, 1966b) has demonstrated that impulsivity in contrast to reflectivity is associated with errors in reading and inductive reasoning tasks.

The ability to transform the concrete to symbolic terms is basic for conceptual thought. Disadvantaged children, because of a tendency to think in concrete terms, have a limited ability to make accurate generalizations from specifics and in transferring knowledge from one situation to another (Gordon, 1964). Also, differences have been found in the level of abstractness of cognitive style. Lower class children categorized pictures on the basis of concrete functional relationships while middle class children classified objects on the basis of abstracted common physical attributes. Even more significant was that lower class children were less able to classify the pictures of objects than the actual objects. The authors concluded that the lower class children had not yet acquired adequate representation of familiar objects (Sigel, Anderson, & Shapiro, 1966).

The most significant information, however, again would reflect the idiosyncracies of various ethno cultural groups of disadvantaged children in the nature and etiology of specific deficits. Sigel has completed much of his work with black children and finds differences between disadvantaged white and black kindergarten children in ability to classify pictorial representations. Suchman and Trebasso's work and more recent work by Spellman further open pandora's box in the area by showing distinct differences in color from size preference in pre-school children from varying ethno cultural backgrounds. Little is known, however, about the etiology of these differences.

Perceptual Ability

Perception refers to the relationship between man and his environment and is conceptually between the sensations of classical psychophysics and cognitive processes which are often under the rubric of concept development (Gould & Kolb, 1964). Perceptual ability is a term indicating the degree of skill necessary to assign meaning to various previously undefined sensory experiences. Sense experiences included in the model under perceptual ability depend on the scope of the project, but from the research reviewed on the disadvantaged, auditory, visual, tactile, and kinesthetic abilities should be measured.

The implications of perceptual ability for learning are clearly indicated by many researchers. Katz's (1967) findings indicated that inadequate auditory and visual discrimination are significantly associated with reading retardation. Deutsch (1964) found that lower

class children were inattentive to auditory stimuli and were, consequently, poor in auditory discrimination and reading skill. (This study is commented on in the language skill section.) Poor auditory discrimination has also been associated with negative effects on articulation (Christine, 1964).

As with language skill and conceptual ability, comparable data on perceptual ability is lacking for children from disadvantaged cultural groups. Recent investigations indicated that there are significant differences among the disadvantaged cultural groups in visual perception (Dennis, 1967), and that children from various cultural backgrounds have characteristic stimulus preference (Spellman, 1967).

The research available on lower class children reveals that a lack of sensory stimulation when the children are capable of responding (Jenson, 1966) rather than physical defects of eyes, ears, or brain, is responsible for many perceptual problems (Deutsch, 1963). Lack of stimulus familiarity among lower class children was found to affect visual discrimination (Covington, 1962; Katz, 1967) and may account for the fact that disadvantaged children had not acquired adequate representations of familiar objects to classify consistently the pictures of objects and the objects themselves (Sigel, Anderson, & Shapiro, 1966). Again, however, adequate profiling of differences for the inclusive ethno-cultural groups known to be represented in the population of disadvantaged children is lacking.

Motivation

Though the potential for motivation may be innate, Ballif points out that its direction and intensity appear to be learned within the environment and determined by social and psychological models and values existing in the home. (Ballif, 1967). Currently, there is mounting support for the importance of motivation as an indispensable condition for learning. Motivation is the energizing of activity to fulfill needs. Kagan (1966[a]) identified broad classes of needs that motivate the child's learning academic skills: (a) the desire for nurturance, praise, and recognition, (b) the desire to increase his perceived similarity to a model individual, and (c) the desire for competence and self worth (p. 34).

In terms of a model for profiling psychoeducational dimensions of children at least two aspects of motivation, it would seem, should be included, achievement motivation and incentives for school tasks. Achievement motivation here defined as the need for achieving in situations which involve standards of excellence, namely school, while important information would also be obtained if incentives that effectively motivate various groups of disadvantaged children were identified.

Limited research has been conducted on achievement motivation, incentives for achievement, and motivation characteristics of lower class children. Rosen (1956) found that achievement motivation was rare among lower class children. Research on incentives has indicated that lower class children learn better with material incentives such as

money and candy than nonmaterial incentives when compared to middle class children (Klugman, 1944; Terrel, 1959). Ausubel (1963) suggested that the use of intrinsic motivation for learning, based retroactively on achievement, as more valid and longer lasting than extrinsic motivation (incentives) for disadvantaged children. Disadvantaged children have typically been characterized by their teachers as lacking motivation for school tasks (Keller, 1966). According to Ballif (1967), disadvantaged children have little curiosity or interest and react without any indication of an inner commitment or comprehension. They express self devaluation attitudes toward achievement, lack of interest in accomplishment and have no discernible drive toward goals or completion of tasks. This deficiency of motivation to achieve is further complicated by motives to achieve goals which are inappropriate and inconsistent with successful achievement in school.

Here again I do not want to bore you with a detailed discussion of a familiar research theme, but the fact that disadvantaged children have been shown to have generalizable motivational predisposition says nothing of what lies behind these predispositions to behave in certain ways. With differential environments influencing the development of motivation in subpopulations of the disadvantaged, it is likely that general statements about the motivation of disadvantaged children may be grossly inaccurate. Surely we have little on which to base intervention procedures for specific groups.

Self Concept

The child develops a self concept through personal and social experiences. Initially from people in the home, and later from teachers and others in society, the child develops an image of the kind of person he is. We are defining self concept as an organized configuration of the perceptions of the self which are admissable to an awareness.

A profiling of self concept across subculturals is included in the model for obvious reasons. The child with a poor self concept is less able to cope with his environment. He is less curious, more anxious and tends to have difficulty making adequate adjustments to social situations. An unfavorable self concept has been shown to be related to low aspirations and academic failures (Hill & Sarason, 1966; Edwards & Webster, 1963).

Disadvantaged children have been described by many investigators as having poor self concepts (Deutsch, 1965; Kvaraceus, 1965; Sutton, 1960). The vast majority of the research on the self concept of disadvantaged children has been done on black children. In the lower class black family, girls are often preferred to boys and lighter skinned children to darker skinned children. The problems of establishing sex role identity in the lower class black family, where female head families are not uncommon, probably contributes to the poor self concept of many black males. In doll play and peer choice studies the negative connotations of identifying with the black race are evident (Clark & Clark, 1958) (Stevenson & Stewart, 1958). It is apparent that black children are often confused in regarding their feelings about

themselves and their group. Some of what has been said about the self concept of the black disadvantaged child applies to other cultural groups among the disadvantaged, but, little evidence would lead to overt generalization. The paternalistic authoritarianism present in the Mexican American subculture, for example, would imply a different process of self depreciation in disadvantaged children than that documented so well for the black population.

The Identification of Process Variables

The process influence of significant environments joins the remaining dimension of the descriptive model. Stodolsky and Lesser in discussing new directions for research in learning with the disadvantaged stress that the answer to the question, "What does it mean in psychological-process terms to be a member of a given social class or subcultural group?" must be more effectively sought.

The fundamental influence of the home as the primary socialization agent on the psychoeducational dimensions of the child must become more focal in our research efforts. Aspects of the home (family) which are directly related to the development of the psychoeducational dimensions obviously discussed are viewed here as process variables. The process variables in the home are therefore defined here as the dynamic mediators between the environment and the child.

Emphasizing the significance of the early environment for the development of intelligence, language skill, and conceptual ability, Hunt (1964) defined cultural deprivation as a "failure to provide an

opportunity for infants and young children to have the experience required for adequate development of those semi-autonomous central processes demanded for acquiring skill in the use of linguistic and mathematical symbols and for analysis of causal relationships (p. 201)." Bloom (1964) interpreted data from one thousand longitudinal studies in an attempt to identify and explain stability of physical characteristics, intelligence, achievement, interests, attitudes, and personality at various ages and to determine the conditions under which the stability can be modified. Among his general findings, supporting Hunt's statement, was the tremendous importance of the early environment. The home environment had its greatest effect on a characteristic, such as intelligence, during its most rapid period of growth. He specifically cited three factors of the environment that affect the development of general intelligence: (a) "the stimulation provided in the environment for verbal development," (b) "the extent to which affection and reward are related to verbal reasoning accomplishments," and (c) "the encouragement of active interaction with problems, exploration of the environment, and the learning of new skills (p. 190)." Influenced by Bloom's work, Wolf (1964) attempted to identify and measure the environmental process variables related to intelligence. Specifically studied were the relationships of parental influence on the intelligence test performance of 60 fifth graders. A scale was devised from the aspects of the home hypothesized to be most relevant to general intelligence items. The significant correlation of .69 between the total score (summation of the scale scores) and the child's IQ was obtained.

Greatest relationships between parent's influence and child's IQ were found for: (a) the parent's intellectual expectations for the child, (b) the amount of information the mother had about the child's intellectual development, (c) the opportunities provided for enlarging vocabulary, (d) the extent to which parents created situations for learning in the home, and (e) the extent of assistance given in learning situations related to school and nonschool activities.

Other researchers have stressed the nature of the family as significant in determining the intelligence measured on the child. Horton (1962) studied the background of 76 three year old black children split into the above average and below average groups on the Merrill-Palmer Scale of Mental Tests. He found that the children in the lower group came from families where one-half the parents had less than an eighth grade education, no father had above a semi-skilled job, and there were less stable marriages and a larger number of siblings than in the high scoring group. The absence of a father in the home, according to Deutsch's (1964) study, adversely influenced the intelligence level of the children. He hypothesized that this adverse effect was not so much the mere absence of the father as the diminuation of organized family activity.

Sufficient interaction between adult and child is necessary for normal language development. The adult acts as a language model as well as socially motivating the child and giving him feedback on his initial mimicry of speech. McCarthy (1961) stressed the relationship between the amount and kind of contact the child has with his mother and the

verbal skills of the child. In the disadvantaged family, however, there is less parent-child interaction and less mother-child interaction than in middle class families (Walters, Conner & Zunich, 1964).

Recently Peterson and DeBord (1966) investigated home environment variables and their relation to achievement in white and black boys in a Southern city. Family composition, economic and social stability, social participation, cultural level of the home and other aspects of the family milieu were assessed. Separate multiple regression analyses for each subcultural group produced multiple correlations of .86 in the case of the black families and .75 in the case of the white. The particularly noteworthy finding however, was the uniqueness of the set of variables for each group. Commonalities existed but the predictive sets were different for each group.

Another pertinent body of work in this regard was that completed by Hess and Shipman at the University of Chicago. The relationships drawn unequivocally between mother's behavior and child's vocabulary level by this study do much to validate the obvious pertinence of family milieu to later learning. The observational nature of this work is also worth noting for as Stodolsky points out it is clear that

> "it will eventually be necessary to execute detailed observational studies of children in home environments if one wants to arrive at valid hypotheses about the dynamics of development in interaction with environment. The dearth of naturalistic data about children's behavior and concomitant environmental circumstances is most regrettable." (1967, pg. 557)

The importance of gaining more information about process variables as they are related to the idiosyncracies of significant subcultural socialization milieus is the critical portion of the proposed comprehensive model.

Summary

The behavioral model is divided into three major sections, subpopulations of the disadvantaged, psychoeducational dimensions of the child, and process variables in the environmental milieu. The sections of the model in summary are: subpopulations as cultural group, rural or urban locale, geographic area, social class, and sex; psychoeducational dimensions as intelligence, language skill, conceptual ability, perceptual ability, motivation, and self concept; and, process variables as child rearing practices, reinforcement patterns, parental expectations, language patterns, family composition, stability, mobility, and the physical surroundings of the home.

To integrate the sections into a cohesive operational model the functions of the subpopulations, psychoeducational dimensions, and process variables must be related. The subpopulation matrix defines the sample of children for whom the psychoeducational dimensions must be measured and profiled. When the performances of various groups are profiled, process variables in the home must be better defined through increased usage and facilitation of observational technique.

The core of the model is an emphasis upon structures and processes over time within the early life of children that are unique to sub-

cultural group, observable and profilable as a matrix of interacting process variables that mould the psychoeducational dimensions measurable at any point in the life of the individual. This tracing or origin or charting of an etrological process would give pertinent information that could be used prescriptively to mould intervention programs of meaning to aid disadvantaged children fill in deficits debilitating to potential educability. Lesser, Clark et al have shown conclusively that ethnic groups show different profiles of psychoeducational dimensions and that these patterns of ability, although more powerful in the lower class, are stable across social class levels.

The "disadvantaged" are a heterogeneous group of people and so long as we seek to define the term with generality each research foray will bring different and more confusing empirical results. We must have more refined models involving more refined assessment of process variables or environmental circumstances. Clusterings of process dimensions that can be shown to be related to meaningful psychoeducational dimensions would then identify disadvantagement in much more comples, idiosyncratic and meaningful terms.

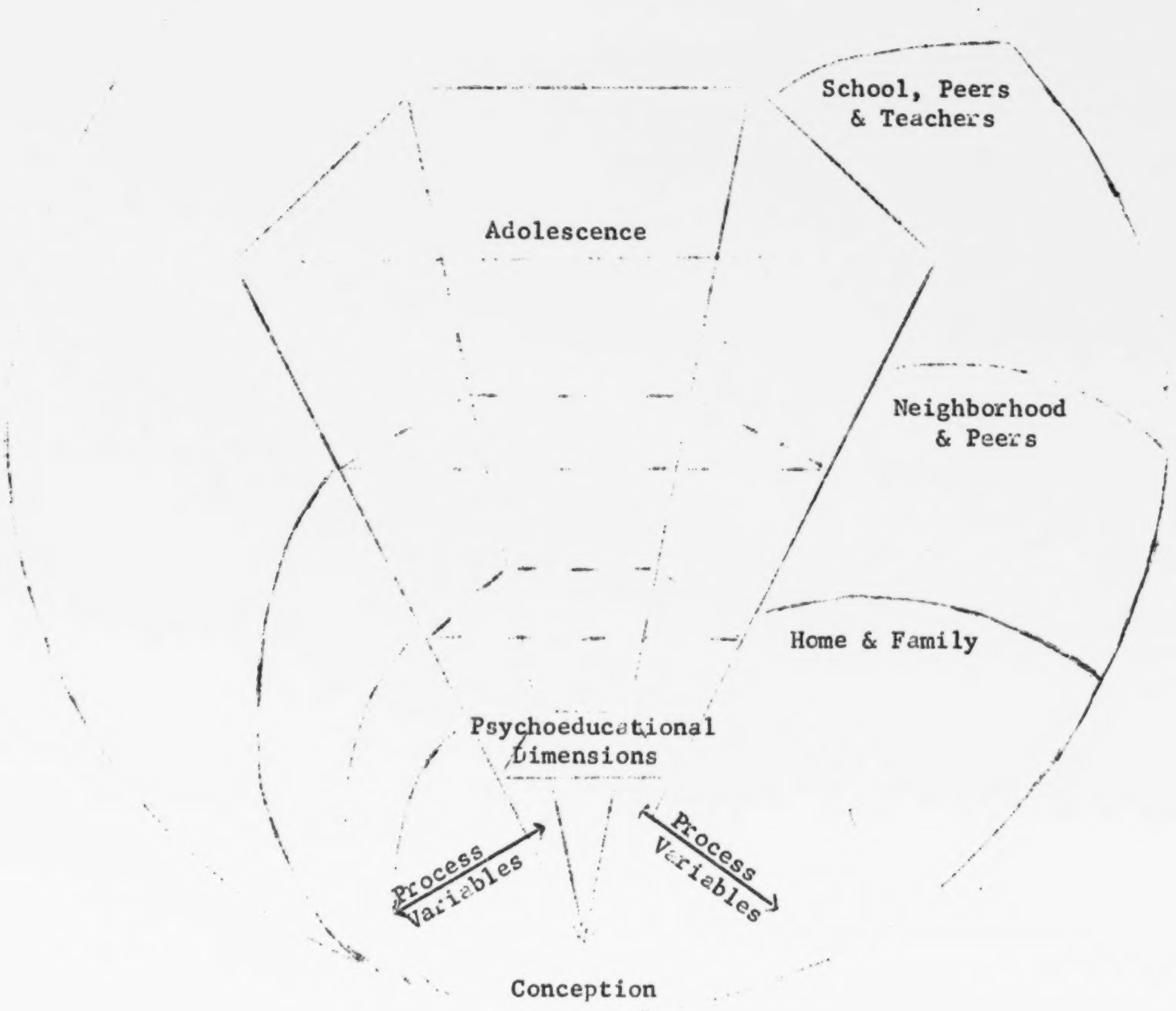
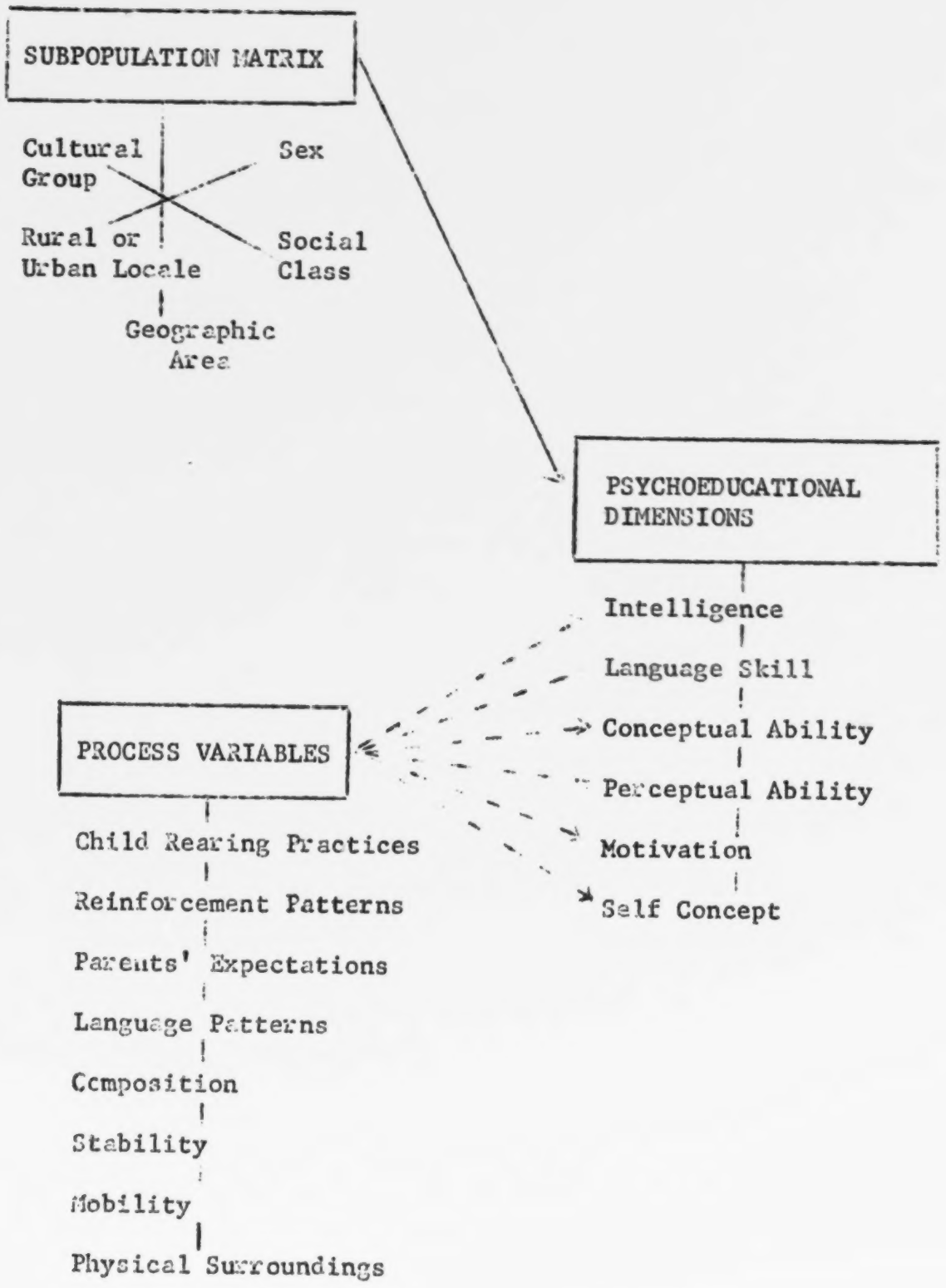


Figure 2. - ENVIRONMENTAL SCHEMA

Figure 3. - BEHAVIORAL MODEL



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